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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,159	06/05/2007	Hiroyuki Ichiba	GUA UTO 331	3245

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THE GATES CORPORATION
IP LAW DEPT. 10-A3
1551 WEWATTA STREET
DENVER, CO 80202

EXAMINER	
ALTUN, NURI B	
ART UNIT	**PAPER NUMBER**
3657	
MAIL DATE	**DELIVERY MODE**
01/27/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,159	ICHIBA, HIROYUKI	
	Examiner	Art Unit	
	NURI ALTUN	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Amendment received on 11/05/2008 has been acknowledged.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims **1, 4, 6, 8 and 9** are rejected under 35 U.S.C. 102(b) as being anticipated by **Kazuhiko (JP9256865)**.

As per claim 1, Kazuhiko teaches a deflection detecting device for annular transmission body having a belt (7) comprising:

foreign matter (14) embedded near said contact face in said transmission belt (see abstract),

and said foreign matter is exposed at said contact face so as to warn of a decrease in the transmission power of said transmission belt (since the foreign matter is placed near contact face and a sensor placed near it, it is construed that foreign matter will be exposed when the belt wears indicating a warning of belt transmission power decrease)

contact face contacting with a pulley (4) so that said belt is wound around said pulley (see paragraph 0013 and Fig. 1),

and said contact face being worn by said pulley when said transmission belt rotates around said pulley (see paragraph 0019; it is also inherent that belt will wear as it rotates around pulley),

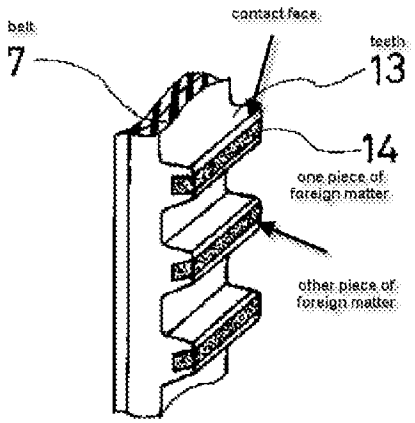
wherein said foreign matter contacting said pulley makes a warning sound to warn of a decrease in the transmission power (since the belt wears due to rotation on the pulley and transmission power decreases, foreign matter will be exposed, and it is construed that the foreign matter inherently will make a sound when it contacts the pulley).

As per claim 4, Kazuhiko teaches a longitudinal direction of said foreign matter (14) being direction perpendicular to contact face (see Figure 2).

As per claim 6, Kazuhiko teaches a plurality of pieces of said foreign matter are embedded in said transmission belt (see Figure 2 and abstract),

a distance between contact face and at least one piece of said foreign matter (14) is different from a distance between contact face and other pieces of said foreign matter (see Figure below).

【図２】



As per claim 8, Kazuhiko teaches foreign matter (14) contacting said pulley (4) (see Fig. 1 and 2) whereby a warning sound having a specific frequency is generated (since the belt wears due to rotation on the pulley and transmission power decreases, foreign matter will be exposed, and it is construed that the foreign matter will inherently make a sound with specific frequency corresponding to the speed of the pulley when it contacts the pulley).

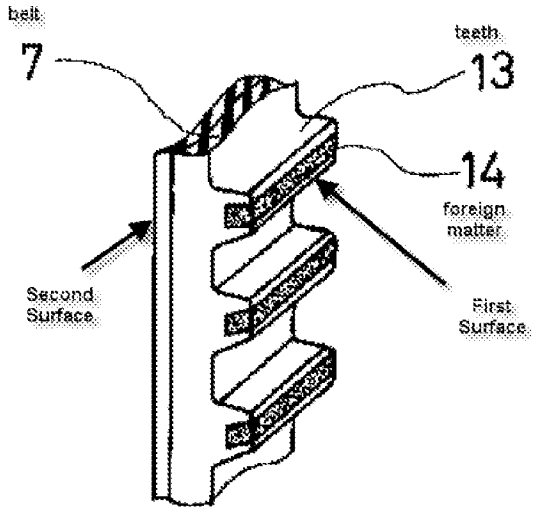
As per claim 9, Kazuhiko teaches a belt (7) wound around a pulley (4) (see Fig. 1), comprising:

a belt body (7), which is made of a predetermined material, having a certain thickness (see Figure and abstract),

and foreign matter (14), which is made of a different material from said predetermined material, embedded in said belt body (see abstract lines 8-10);

a distance from said foreign matter to a first surface of said belt body in the thickness direction being shorter than a distance from said foreign matter to a second surface of said belt body in the thickness direction (see Figure 2; it is clearly seen that foreign matter is closer to one side than to the other, it is construed that one direction is shorter than the other in the thickness direction).

【図2】



said first surface being worn by said pulley so that said foreign matter is exposed at said first surface (see paragraph 0019; it is also inherent that belt will wear as it rotates around pulley and foreign matter will be exposed), whereby said foreign matter contacting said pulley makes a sound when said transmission belt rotates around said pulley (since the belt wears due to rotation on the pulley, foreign matter will be exposed and contact pulley, and it is construed that the foreign matter will make a sound when it contacts the pulley).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **3, 5, 13-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kazuhiko (JP9256865)**.

As per claim 3, Kazuhiko teaches all the structural elements of the claimed invention as mentioned in claim 1, but doesn't explicitly disclose said foreign matter being softer than said pulley.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify said foreign matter being softer than said pulley in order to prevent damage to the pulley. Also note *MPEP Section 2144.07* states that the selection of a known material based on its suitability for its intended use supports a prima facie obviousness determination.

As per claim 5, Kazuhiko teaches all the structural elements of the claimed invention as mentioned in claim 4, but doesn't explicitly disclose width of said foreign matter becoming narrower as said foreign matter approaches contact face.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify width of said foreign matter to become narrower as said foreign matter approaches contact face in order for the foreign matter to fit into the belt assembly with proper retention. Also note *MPEP Section 2144.04 B* states that the configuration of the claimed part is a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed part was significant.

As per claim 13, Kazuhiko teaches a transmission belt (7) comprising:

a contact face contacting with a pulley so that said transmission belt is wound around said pulley (see Fig. 1),

foreign matter (14) embedded near said contact face in said transmission belt (see abstract, lines 8-10);

said contact face being worn by said pulley when said transmission belt rotates around said pulley (see paragraph 0019; it is also inherent that belt will wear as it rotates around pulley), so that said foreign matter is exposed at said contact face so as to warn of a decrease in the transmission power of said transmission belt on said pulley (since the foreign matter is placed near contact face, it is construed that foreign matter will be exposed when the belt wears indicating a warning of belt transmission power decrease),

wherein a longitudinal direction of said foreign matter is a direction perpendicular to said contact face (see Figure 2).

However Kazuhiko doesn't explicitly disclose a width of said foreign matter becoming narrower as said foreign matter approaches said contact face.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify width of said foreign matter to become narrower as said foreign matter approaches contact face in order for the foreign matter to fit into the belt assembly with proper retention.

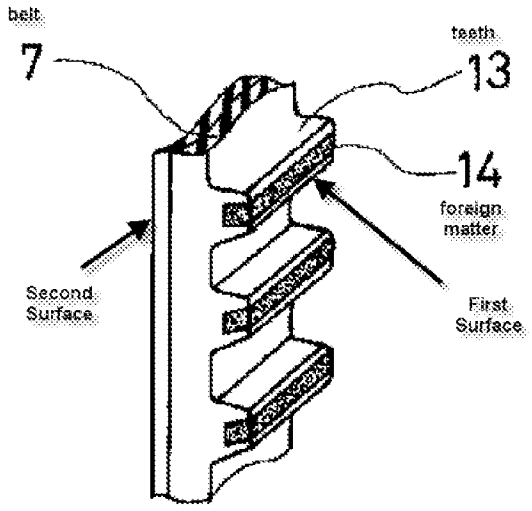
As per claim 14, Kazuhiko teaches a transmission belt (7) comprising:

a belt body, which is made of a predetermined material, having a certain thickness (see Figure and abstract),

and foreign matter, which is made of a different material from said predetermined material, embedded in said belt body (see abstract lines 8-10);

a distance from said foreign matter to a first surface of said belt body in the thickness direction being shorter than a distance from said foreign matter to a second surface of said belt body in the thickness direction (see Figure 2; it is clearly seen that foreign matter is closer to one side than to the other, it is construed that one direction is shorter than the other in the thickness direction),

【図２】



wherein a longitudinal direction of said foreign matter is a direction perpendicular to said first surface (see Figure 2).

However Kazuhiko doesn't explicitly disclose a width of said foreign matter becoming narrower as said foreign matter approaches said contact face.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify width of said foreign matter to become narrower as said foreign matter approaches contact face in order for the foreign matter to fit into the belt assembly with proper retention.

3. Claims **10-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kazuhiko (JP9256865)**, in view of **Mohr et al. (6,672,983)**.

As per claim 10, Kazuhiko teaches an indication apparatus for indicating the end of life of a transmission belt (see title), comprising:

a pulley (4), a transmission belt (7) that is wound around said pulley (see Fig. 1) having;

a contact face contacting said pulley so that said transmission belt is wound around said pulley (see Fig. 1),

foreign matter (14) embedded near contact face (see abstract, lines 8-10) in transmission belt (7), and said foreign matter is exposed at the contact face (since the foreign matter is placed near contact face, it is construed that foreign matter will be exposed when the belt wears)

said contact face being worn by said pulley when said transmission belt rotates around said pulley so that said foreign matter is exposed at said contact face (see paragraph 0019; it is also inherent that belt will wear as it rotates around pulley, and foreign matter will be exposed),

whereby said foreign matter contacting said pulley makes a specific sound (since the belt wears due to rotation on the pulley, foreign matter will be exposed, and it is construed that the foreign matter will make a specific sound when it contacts the pulley),

However Kazuhiko doesn't explicitly disclose a sound sensor, which detects said specific sound, set up near where said transmission belt contacts said pulley; and a warning apparatus which sends out a warning according to said specific sound detected by said sound sensor.

Mohr et al. teach a sound sensor, which detects said specific sound, set up near where said transmission belt contacts said pulley; and a warning apparatus which sends out a warning according to said specific sound detected by said sound sensor (col. 4, lines 13-15).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kazuhiko to include sensor taught by Mohr et al. in order to improve the warning system of transmission power decrease.

As per claim 11, Kazuhiko teaches all structural elements of the claimed invention as mentioned in claim 10, but doesn't explicitly disclose said foreign matter contacting said pulley at a predetermined cycle making a specific sound appear at said predetermined cycle when said transmission belt rotates at a predetermined speed.

Mohr et al. teach said foreign matter contacting said pulley at a predetermined cycle making a specific sound appear at said predetermined cycle(col.4, lines 41-43) when said transmission belt rotates at a predetermined speed (col.4, lines 11-12).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kazuhiko to include the warning system taught by Mohr et al. in order to indicate the end of life of transmission belt better.

As per claim 12, Kazuhiko teaches all structural elements of the claimed invention as mentioned in claim 11, but doesn't explicitly disclose warning apparatus sending out a warning when said specific sound appears at said predetermined cycle.

Mohr et al. teach warning apparatus sending out a warning when said specific sound appears at said predetermined cycle (col.4, lines 11-15).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kazuhiko to include warning apparatus taught by Mohr et al. in order to improve the warning system of transmission power decrease.

4. Claim **7** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kazuhiko (JP9256865)**, in view of **Cicognani (GB2046399).**

Kazuhiko teaches all the structural elements of the claimed invention as mentioned in claim 1, but doesn't explicitly disclose said foreign matter being given a color, which is different from a color of other parts of said transmission belt.

Cicognani teaches a toothed transmission belt having foreign matter (8) being given a color, which is different from a color of other parts (6 and7) of said transmission belt (see abstract).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kazuhiko to include the belt having

foreign matter of different color taught by Cicognani in order to visually indicate the wear of the belt.

Response to Arguments

Applicant's arguments filed 11/05/2008 have been fully considered but they are not persuasive.

In response to applicant's argument that "the present invention teaches a distinct type of embedding from the prior art," the Examiner respectfully notes that, since the applicant did not provide a special definition for "embedding" in the disclosure, the claim has been given its broadest reasonable interpretation and therefore the prior art reference meets the limitations of the claim.

Applicant next argues, "metal body of Kazuhiko is always exposed at the surface and cannot become exposed." The Examiner notes that as contact face gets worn, more foreign material will become exposed.

Applicant next argues, "Kazuhiko will make the same sound from the beginning of operation, which cannot warn anyone." The examiner respectfully disagrees. Sound made by the belt of Kazuhiko can be considered as a warning sound as it keeps continuing during the operation of the belt. Further, applicant's arguments regarding, "warning anyone" are narrower than the "to warn" recitation.

Applicant next argues, "the longitudinal direction of the foreign material is parallel to the contact surface, not perpendicular as recited by claim 4." The Examiner respectfully notes that, upon viewing Figs. 2 and 3 of Kazuhiko, the longitudinal

direction can be interpreted as the direction extending from left to right; therefore longitudinal direction of foreign matter is perpendicular to the contact face.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the contact surface is one continuous single surface of the belt and the distance to the surface recited in claim 6 is the perpendicular distance to the nearest part of the contact surface) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant next argues, "there is no distance as recited in claim 9 between the metal and the first surface." The examiner notes that the claim doesn't absolutely require a distance. Further, the first distance is considered zero and is closer than the second distance.

Applicant next argues, "the examiner provides no supporting evidence that one skilled in the art would find it obvious to make the foreign matter softer than the pulley material." The examiner repeats the rationale provided, that foreign matter should not damage the pulley during running for the proper operation of the mechanism; therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the foreign matter softer than the pulley material. Also note *MPEP Section 2144.07* states that the selection of a known material based on its suitability for its intended use supports a prima facie obviousness determination.

Applicant next argues, "the examiner provides no supporting evidence that one skilled in the art would find it obvious to modify the width of the foreign matter or how this would improve 'fit or retention'." The examiner notes that the foreign matter needs to fit into every part of the belt with appropriate retention for the proper operation of the belt' therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify width of said foreign matter to become narrower as said foreign matter approaches contact face. Also note *MPEP Section 2144.04 B* states that the configuration of the claimed part is a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed part was significant.

Applicant next argues, "Mohr et al. do not teach or suggest 'a warning apparatus which sends out a warning according to said specific sound detected', and 'specific sound' as recited in claims 10-12." The examiner respectfully disagrees. Mohr et al. teach noise at a specific tooth engagement frequency (col.4, line 13) which is considered as '*specific sound.'* Further, Mohr et al. teach, that noise is measured by a microphone and sound meter at a distance from the belt (col.4, lines 13-15), which is considered as noise warning being sent out according to specific sound detected, and the whole assembly is considered as a warning apparatus.

Applicant next argues, "the colored material of Cicognani is not foreign matter as recited in claim 7." The examiner respectfully notes that surface of the belt teeth is covered with a laminate which is separated by an elastomeric material (foreign matter) of different color (see abstract).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NURI ALTUN whose telephone number is (571)270-5807. The examiner can normally be reached on Mon-Fri 7:30 - 5:00 with first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272 7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bradley T King/
Primary Examiner, Art Unit 3657

NBA